

REMARKS

Claims 21-41 are pending. The Examiner's reconsideration of the rejections is respectfully requested in view of the amendments and remarks.

Claims 21-41 have been rejected under 35 USC 103(a) as being unpatentable over Inside the C++ Object Model, Stanley Lippman 1996, in view of Object-Oriented Analysis and Design, by James Martin 1992. The Examiner stated essentially that the combined teachings of Lippman and Martin teach or suggest all of the limitations of Claims 21-41.

Claims 21, 28 and 35 are the pending independent claims.

Claim 21 claims, *inter alia*, "inlining the virtual base class into at least a first class of the plurality of classes, wherein the virtual base class is stored in a fixed offset in a memory layout of the first class." Claim 28 claims, *inter alia*, "inlining the virtual base class into at least a fourth class of a plurality of classes virtually derived from the virtual base class, wherein the virtual base class is stored in a fixed offset in a memory layout of the fourth class." Claim 35 claims, *inter alia*, "inlining the virtual base class into at least a third class of a plurality of classes virtually derived from the virtual base class, wherein the virtual base class is stored in a fixed offset in a memory layout of the third class."

Lippman teaches that when a base class object is directly initialized or assigned with a derived class object, the derived object is sliced to fit into the available memory resources of the base type and there is nothing of the derived type remaining (see page 26). Lippman does not teach or suggest that inlining includes storing a virtual base class in a fixed offset in a memory layout of another class, essentially as claimed in Claims 21, 28 and 35. Lippman describes a

method for devirtualization, wherein there is nothing of the derived type remaining. Lippman does not teach or suggest the claimed inlining. For example, Lippman's devirtualization does not include the use of a fixed offset of a derived object sliced in to the base type. Lippman merely teaches that a derived class is sliced into a base type and that nothing of the derived class remains. Therefore, Lippman fails to teach or suggest all the limitations of Claims 21, 28 and 35.

Martin teaches methods for canceling inherited features (see page 269). Martin does not teach or suggest that inlining include storing a virtual base class in a fixed offset in a memory layout of another class, essentially as claimed in Claims 21, 28 and 35. Nowhere does Martin teach the claimed method for inlining. Therefore, Martin fails to cure the deficiencies of Lippman.

The combined teachings of Lippman and Martin teach a method for devirtualization with cancellation of inherited features. The combined teachings of Lippman and Martin fail to teach or suggest that inlining includes storing a virtual base class in a fixed offset in a memory layout of another class, essentially as claimed in Claims 21, 28 and 35.

Claims 22-27 depend from Claim 21. Claims 29-34 depend from Claim 28. Claims 36-41 depend from Claim 35. The dependent claims are believed to be allowable for at least the reasons given for Claims 21, 28 and 35.

At least Claims 22, 29 and 36 are believed to be allowable for additional reasons.

Claims 22, 29 and 36, *inter alia*, that a “subobject is shared via a virtual base pointer to the subobject at the fixed offset in the memory layout” of another class.

Lippman describes a method for devirtualization, wherein there is nothing of the derived type remaining (see page 26). Lippman does not teach or suggest that the derived class may be

shared after being devirtualized. Since the derived type is destroyed, it is apparent that it may not be shared via a virtual base pointer. Therefore, Lippman fails to teach all of the limitations of Claims 22, 29 and 36.

Martin fails to cure Lippman in this regard. Martin does not teach or suggest the claimed inlining, much less that an inlined subobject of a virtual based class may be shared via a virtual base pointer to the subobject at the fixed offset in the memory layout of another class, essentially as claimed in Claims Claims 22, 29 and 36. Therefore, Martin fails to cure the deficiencies of Lippman.

For the forgoing reasons, the present application, including Claims 21-41, is believed to be in condition for allowance. The Examiner's early and favorable action is respectfully urged.

Respectfully submitted,

Dated: September 18, 2007

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